



1-1-2012

Predicting and Insuring Against Patent Litigation

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Predicting and Insuring Against Patent Litigation

Professor Colleen Chien

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Occupy Patents?



Occupy Patents?



**250K
Patents**





**250K
Patents**

Held by:

- **Qualcomm**
- **Nortel**
- **Google**
- **Apple**
- **Kodak**
- **Others**



**Which are
the good
ones?**

**250K
Patents**



**250K
Patents**

**Which are
the riskiest
ones?**

Problem: Which Patents will be litigated?

Issuance

(12)	United States Patent Zadesky et al.
(54)	TOUCH PAD HANDHELD DEVICE
(75)	Inventors: Stephen Paul Zadesky , San Carlos, CA (US); Tung Yew Tan , San Francisco, CA (US)
(73)	Assignee: Apple Computer, Inc. , Cupertino, CA (US)
(*)	Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 117 days.
(21)	Appl. No.: 10/188,182
(22)	Filed: Jul. 1, 2002
(65)	Prior Publication Data US 2003/0076306 A1 Apr. 24, 2003
	Related U.S. Application Data
(60)	Provisional application No. 60/359,551, filed on Feb. 25, 2002; provisional application No. 60/346,237, filed on Oct. 22, 2001.

Enforcement

Litigate

1 %

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Enforcement

Litigate

1 %

Relevant Traits

Issuance

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Enforcement

Litigate

1 %

Intrinsic Traits

Patent Events

Issuance

Ownership

Investment

Financing

Citation

Enforcement

(12) United States Patent Zadesky et al.
(54) TOUCH PAD HANDHELD DEVICE
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Transfer

Maintain

Securitize

Forward
Citation

Litigate

Size
Change

Reexamine

1 %

**Intrinsic
Traits**

**Acquired
Traits**

Methods

Data

- Matched pair set: 659 litigated patents and 3 x 659 unlitigated patents issued in 1990 and matched by primary PTO technology class (rare events model)
- Log-transformed versions of continuous variables

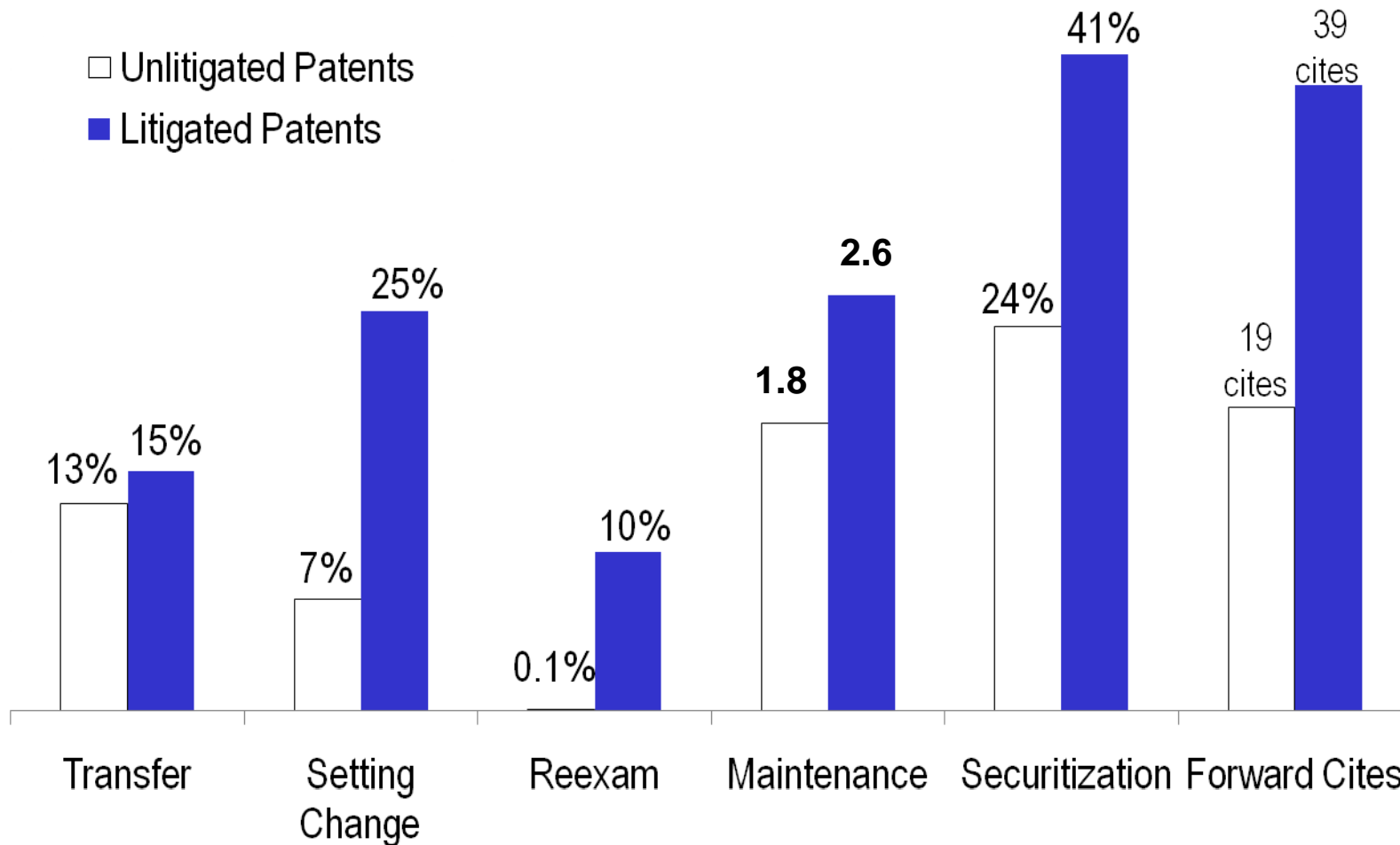
Coding

- Transfer: hand-coded to find true re-assignments and exclude M&A, intra-company transfers
- Reexamination: ex parte only

Statistics

- Logistic regression (SPSS, R)
- Characteristics developed over life and prior to first litigation (time-series)
- Intrinsic, acquired, and intrinsic + acquired

Litigated vs. Unlitigated Patents – Acquired Traits (Characteristics Developed Over Patent Lifetime)



Logistic Regression Model Results (Time-Series)

Appendix A. The Effect of Various Patent Characteristics on the Likelihood of Litigation (Multivariate Logistic Regression)

Variables in the Equation	Lifetime Model (Characteristics Acquired over Patent Life)			Time-Series Model (Characteristics Acquired Prior to Litigation)		
	Intrinsic Variables Only	Acquired Variables Only	Intrinsic and Acquired Variables	Intrinsic Variables	Acquired Variables	Intrinsic and Acquired Variables
Nagelkerke R Square	.209	.330	.400	.209	.376	.459
<i>Intrinsic Variables</i>						
Claims (Log)	1.349*** (.061)	—	1.158* (.068)	1.349*** (.061)	—	1.242*** (.068)
Issued to Small-Entity Owner ^T	2.948*** (.107)	—	3.204*** (.123)	2.948*** (.107)	—	3.136*** (.122)
Foreign Counterparts (Log)	1.100 (.059)	—	1.018* (.065)	1.100 (.059)	—	1.043 (.066)
Family Members (Log)	4.383*** (.106)	—	2.479*** (.119)	4.383*** (.106)	—	2.972*** (.120)
<i>Acquired Variables</i>	—			—		
Recorded Assignments (Log)	—	.283*** (.140)	.404*** (.147)	—	.197*** (.142)	.303*** (.146)
Recorded Transfer ^T	—	2.052 (.197)	1.624* (.208)	—	2.406*** (.224)	1.969** (.235)
Owner Size Change ^T	—	2.843*** (.145)	1.792*** (.159)	—	2.247*** (.192)	1.452* (.200)
Ex Parte Reexamined ^T	—	79.000*** (.747)	46.575*** (.761)	—	63.669*** (1.039)	35.501*** (1.058)
Maintenance Fees ⁶ /In Force Prior to First Litigation ^T	—	1.991*** (.059)	2.162*** (.064)	—	7.8E+08 (1507.8)	7.6E+08 (1465)
Adjusted Forward Cites (Log)	—	1.520*** (.050)	1.417*** (.053)	—	1.418*** (.046)	1.46*** (.050)
Securitized ^T	—	1.71*** (.171)	1.443* (.179)	—	2.502*** (.190)	2.092*** (.202)

*****s convey significance of Difference.***

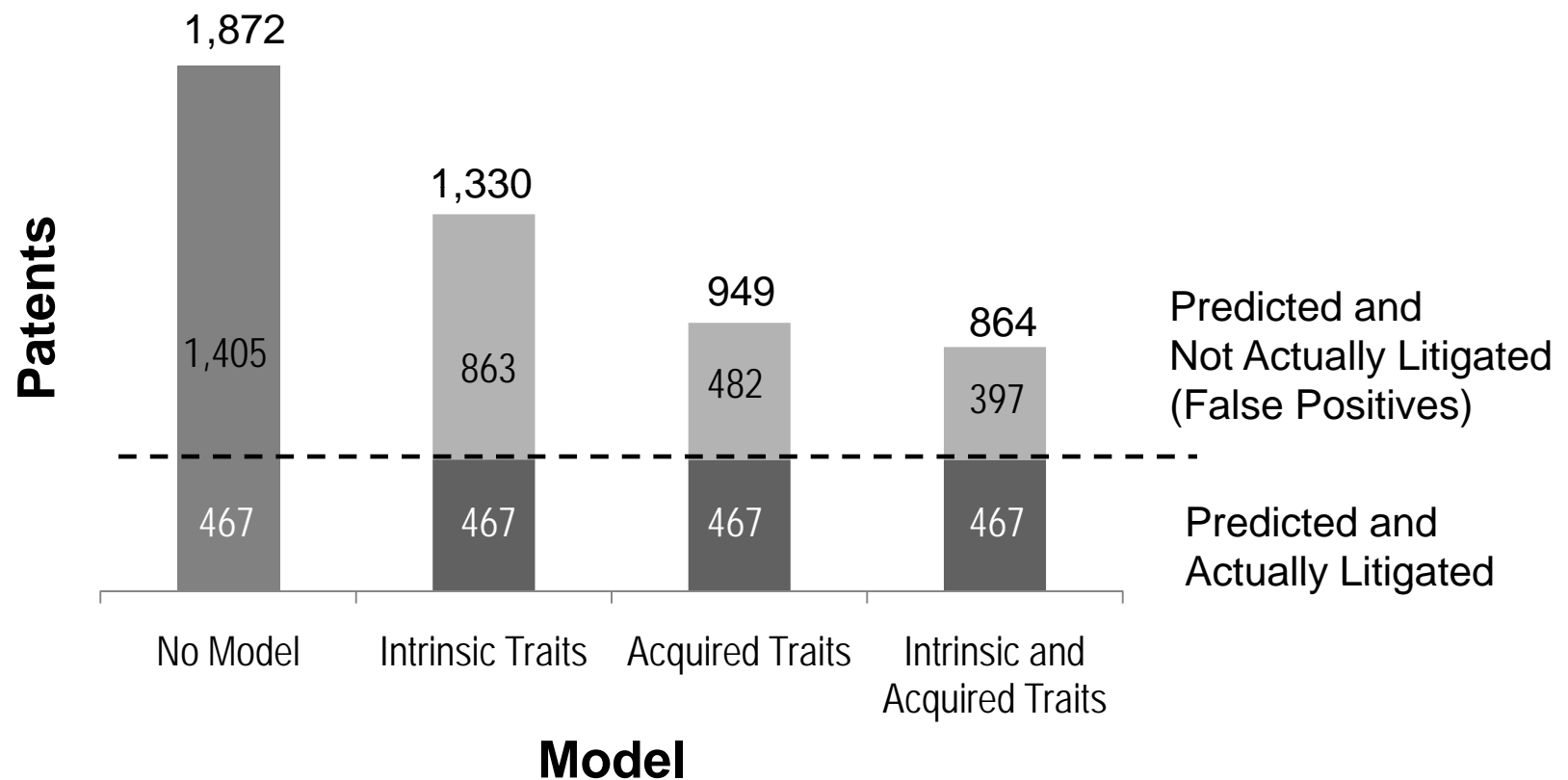
More stars = difference more likely to be real

Predicted v. Actually Litigated Patents (Time-Series)

<u>Model</u>	<u>Nagelkerke R2</u>
Intrinsic Characteristics	.209
Acquired Characteristics	.376
Intrinsic and Acquired Characteristics	.459

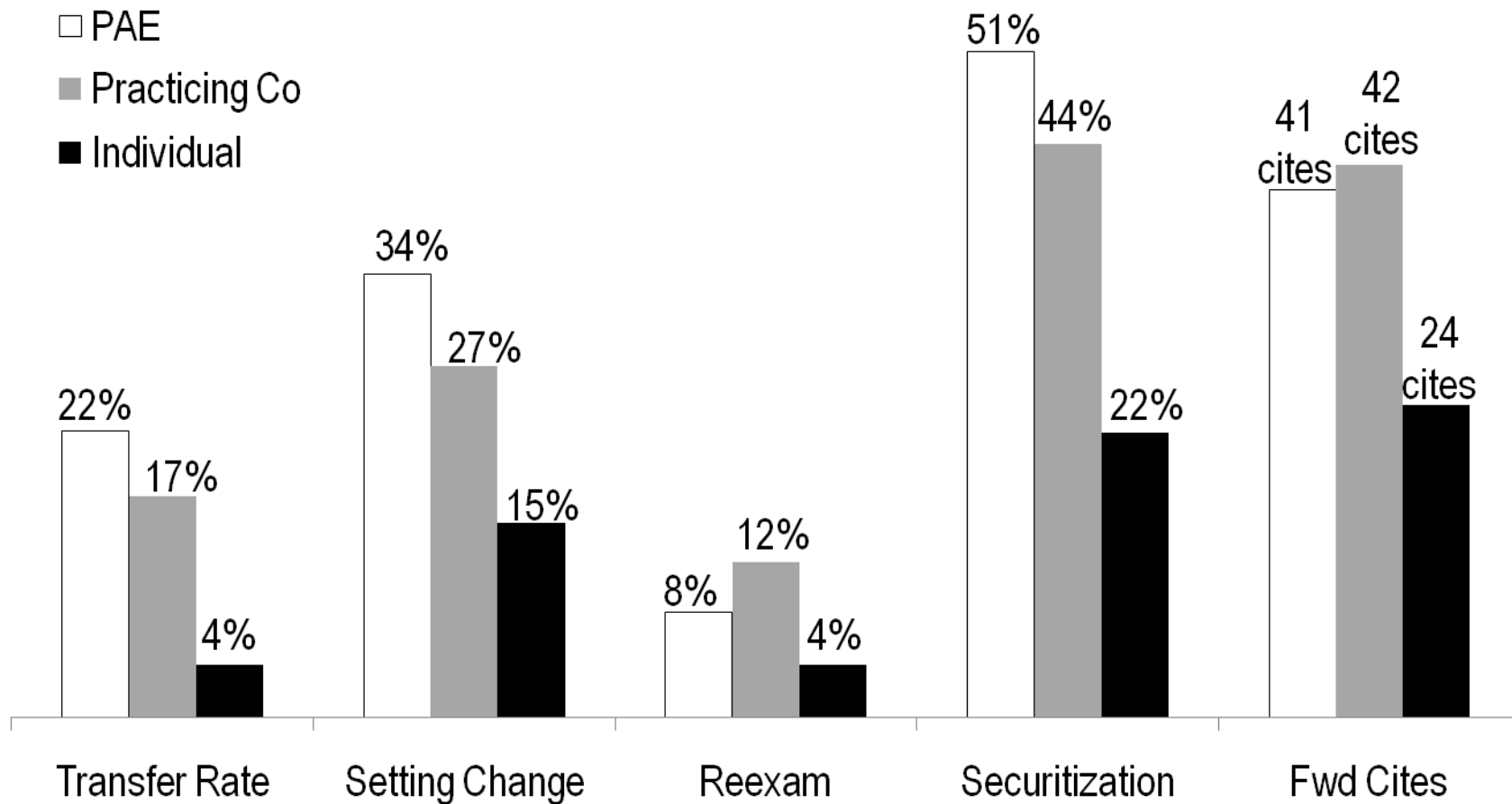
Bigger (R2) is Generally Better

Payoff: Predicted v. Actually Litigated Patents (Time-Series)



70% observation rate

Differences by Litigant Type



Practical/Policy Implications

Potential uses of this work

- **Patent Management/Defense 1.0: freedom to operate, R&D planning and decision-making, maintain/abandon, portfolio assessment**
- **Patent Defense 2.0: defensive buying/aggregation, reexamination, insurance**

Policy implications

Patent risk is a function of value and ownership

- **A new kind of patent notice failure. Not a problem of what does this patent cover, but who owns the patent , what they do with it. Those transactions aren't required to be recorded, should they be?**

Expressive Implications

Long-Felt Need for a sorting mechanism

- Gold-plating
- Self-reported valuation
- Increased Maintenance fees

Thank you

Full Paper available:

**Predicting Patent Litigation,
90 Tex. Law Rev. 293 (2011)
SSRN download**

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